MERTZ MANUFACTURING, LLC

Chain Trencher Installation, Operation, and Service Manual

Part No. 999-839

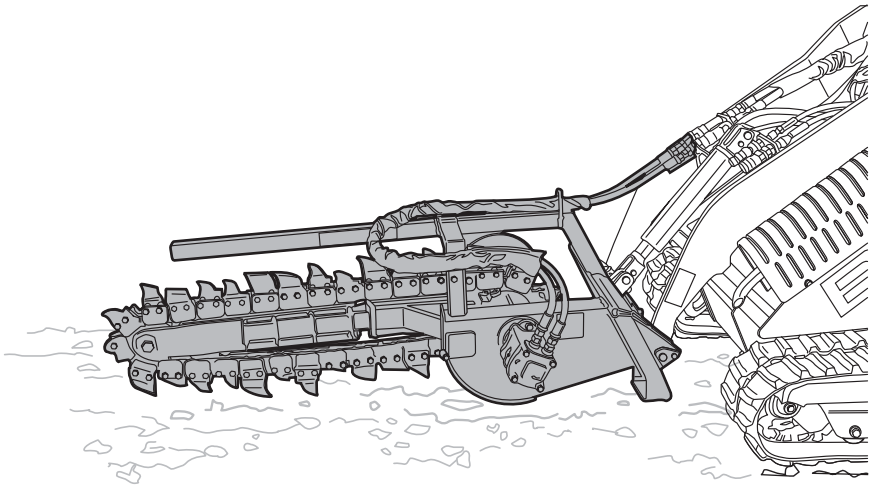

Table of Contents

Section 1 – Safety Precautions 1–1
Attachment Installation and Removal 1–1
Attachment Lock Pins 1–1
Installation of Trencher Attachment 1–2
Operating Instructions for the Chain Trencher Hydraulic Attachment 1–6

Section 2 – Travel Crawl Control 1–9
Removal of Hydraulically Powered Attachments 1–11

Section 3 – Troubleshooting 1–13

Section 4 – Maintenance 1–14
Recommended Maintenance Schedule 1–14
Greasing the Trencher 1–14
Adjusting Digging Chain Tension 1–15
Trencher Boom Replacement 1–17
Replacing the Digging Teeth 1–18
Replacing the Drive Sprocket 1–19
Replace Nose Drive Sprocket 1–20
Chain Master Link 1–21
Chain Configuration 1–22
Configuring the Chain 1–23

Section 5 – Parts List 1–24

Section 1 – Safety Precautions

⚠ CAUTION

Before installing the Chain Trencher or any other powered attachment, be sure to refer to the "Safety", "Pre-Start Inspection" and "Machine Start-up" sections of the power units Operator's Manual.

Since Mertz Manufacturing LLC has no direct control over machine application or operation, following the proper safety practices is the responsibility of the owner and/or operator. Remember that this unit is only as safe as those who operate it. Safety tips shown throughout this Operator's Manual must be followed at all times.

Attachment Installation and Removal

NOTICE: The following instructions are based on the installation of the chain trencher on a Mertz Manufacturing LLC power unit.

Attachment Lock Pins

The mounting plate located at the front of the machine provides for the easy installation and safe use of the wide variety of available attachments. This system is very easy to use, but requires the proper use of the attachment lock pins. There are two positions for the attachment lock pins (Item 1, Figure 1), the unlocked position and the locked position. Once the machine has picked up an attachment, shut off the engine and rotate the attachment locks into the "locked" position. As you rotate the lock pin, it will drop downwards, securing the attachment to the machine. If the lock pin does not drop into the locked position, start the engine and tilt the attachment slightly forwards or backwards until the lock pins snap into place.

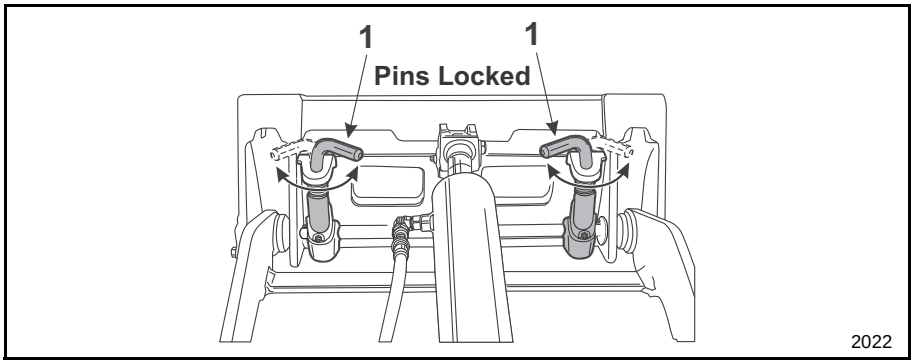

Figure 1 Attachment Locks in Locked Position

⚠ CAUTION

Until the attachment lock pins are fully in the locked position, the attachment has not been safely secured to the machine. Do not stand near the attachment until it is fully secured to the machine.

To release an attachment, rotate the attachment locks to the “unlocked” position (Item 1, Figure 2). The lock pins will automatically rise, releasing the attachment from the machine. If the pins do not release the attachment or are very hard to rotate, start the engine and tilt the attachment slightly forwards or backwards until the pins can be rotated.

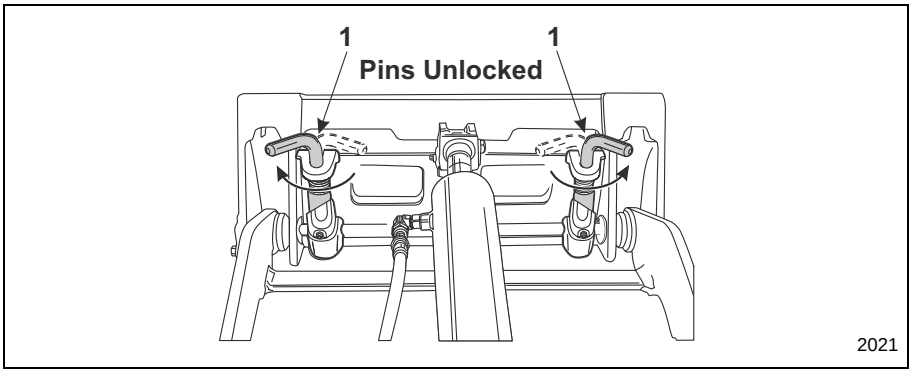

Figure 2 Attachment Locks in Unlocked Position

Installation of Trencher Attachment

To install the trencher:

1. Position the attachment on a level surface.

   NOTICE: Clean the lower edge of the female attachment mounting plate to remove any debris that might interfere with the attachment installation.

2. Start the machine engine, lower the loader arm and tilt the mounting plate forwards.

   NOTICE: Make sure that both of the attachment lock pins (Item 1, Figure 2 and Item 3, Figure 3) are in the "unlocked" position.

3. Slowly drive towards the attachment and align the top edge of the male mounting plate (Item 1, Figure 3) and the upper lip of the female attachment mounting plate (Item 2, Figure 3).

   NOTICE: Make sure to position the attachments hydraulic hoses (Item 4, Figure 3) so that they are not damaged during the installation process. Tuck the upper edge of the male mounting plate into the upper lip of the female attachment mounting plate.

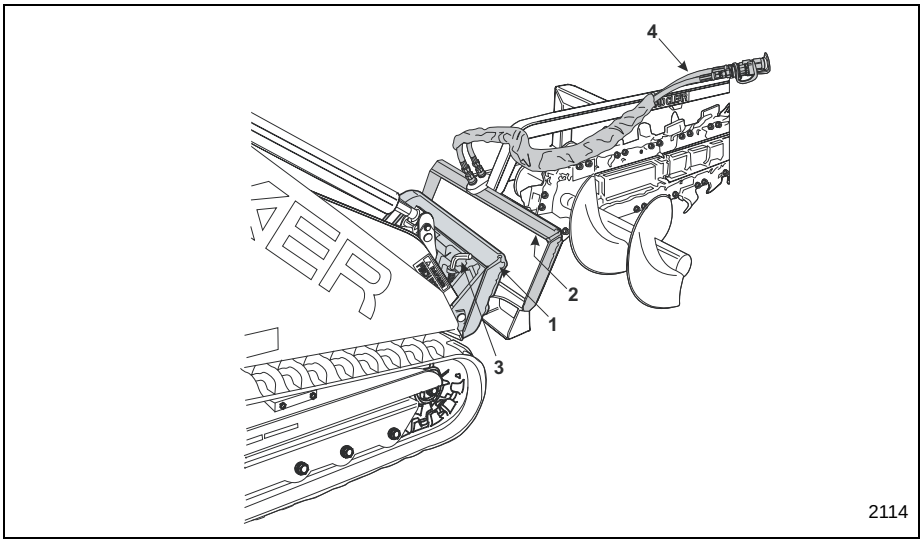

Figure 3 Hydraulically Powered Attachment Installation

4. When the machines mounting plates top edge is seated in the attachment mounting plate, curl the machines mounting plate backwards slightly to allow the lower edge of the machines mounting plate to slide into position. See Figure 4.

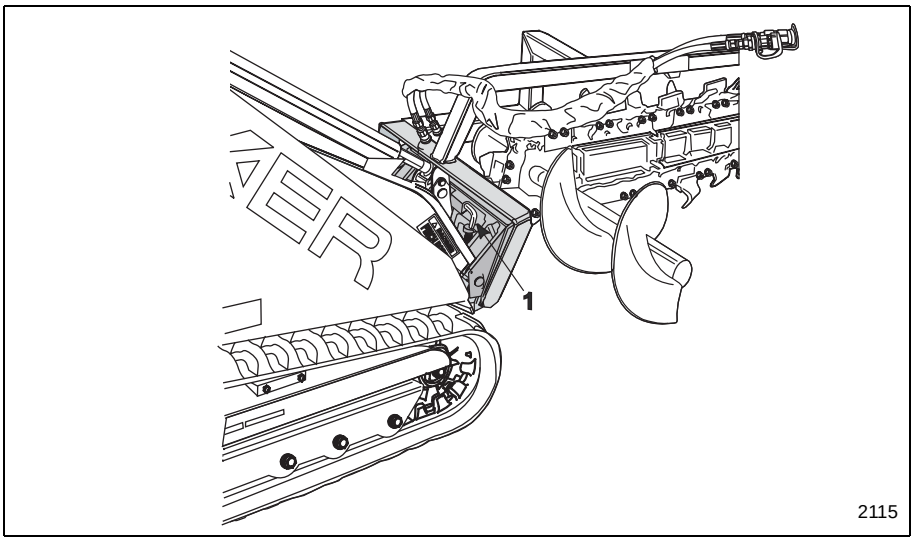

Figure 4 Hydraulically Powered Attachment Installed

5. Shut the engine off.
6. Rotate the attachment lock pins (Item 1, Figure 4) into the locked position securing the attachment to the machine.
7. Start the engine and raise the attachment off the ground. Visually inspect the bottom edge of the attachments mounting plate to make sure that both of the attachment lock pins are securely holding the attachment in position.

⚠ CAUTION

DO NOT go underneath the attachment when it is raised.

8. Lower the trencher to the ground and shut off the engine.
9. Move any of the main hydraulic controls forward and backward to release any stored hydraulic pressure.
10. Attach the hydraulic hoses to the quick connects.
    - There are two hydraulic hoses that need to be connected. The quick connect system prevents you from incorrectly connecting the hydraulic hoses, but both hoses need to be connected for the attachment to operate.
    - Make sure that the engine has been shut off before beginning this procedure.
        a. Move the AUXILIARY control levers (Items 1, Figure 5) either towards the hand grip or backwards into the REVERSE detent position. This will release the hydraulic pressure locked in the auxiliary hydraulic lines. Leave the control lever in the detent position.

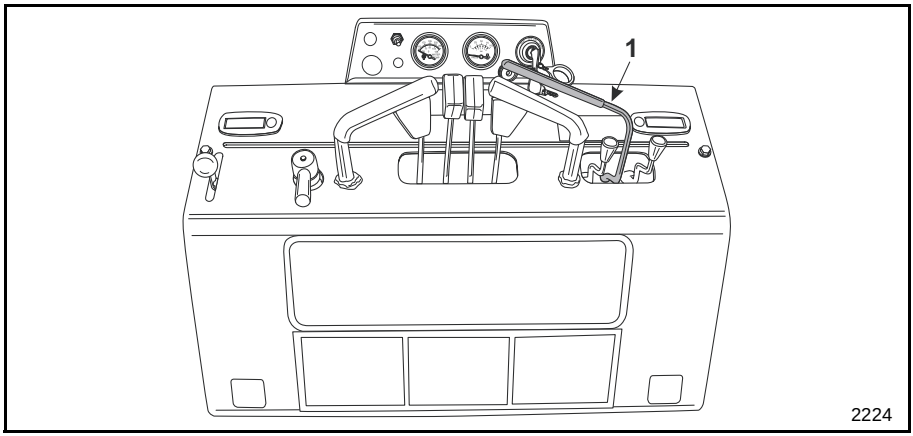

Figure 5 Auxiliary Control Lever

        b. Remove the protective covers (Items 4, Figure 6) from the attachment quick connectors.
        c. Wipe off the end of each of the connectors (Items 1, 2, 3, 4, Figure 6) to remove any dirt or debris.

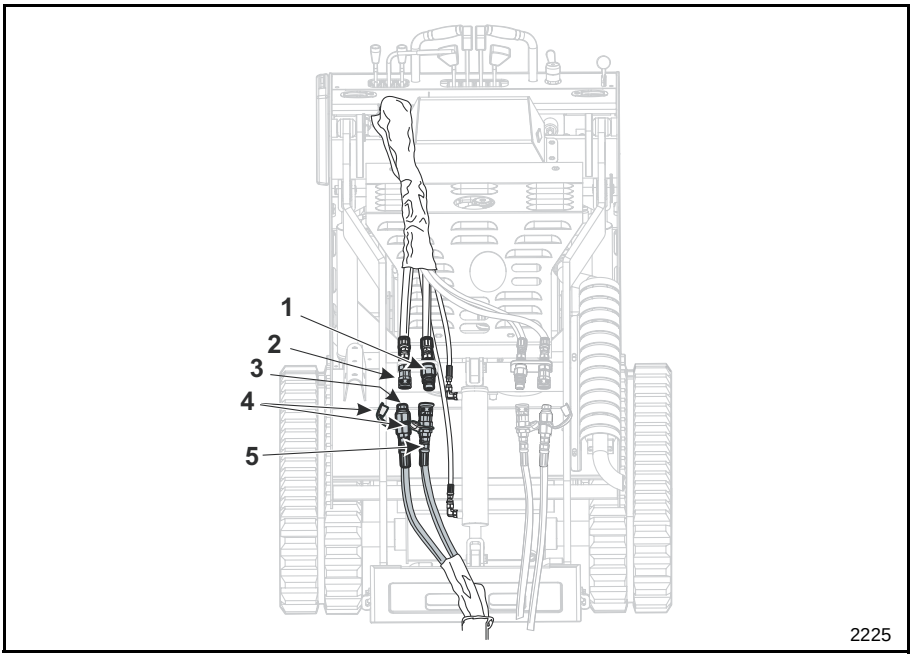

Figure 6 Auxiliary Hydraulic Quick Connects

d. Insert the attachments' male coupling (Item 3, Figure 6) into the female bulkhead quick connect coupling (Item 2, Figure 6) on the machine and push until the connector locks into position.

e. Repeat the above process to connect the attachments' female quick connect (Item 5, Figure 6) on the other hose to the male bulkhead connector (Item 1, Figure 6) on the machine.

f. Check the security of both connections by gently tugging on the attachment hoses to make sure that the quick connects are seated properly.

11. Make sure that the hydraulic hoses are routed so that they will not be in the way or damaged during machine operation. Figure 7 shows how the hoses might be routed to keep them out of the way during operation and prevent them from being damaged.

12. The attachment is now ready to use.

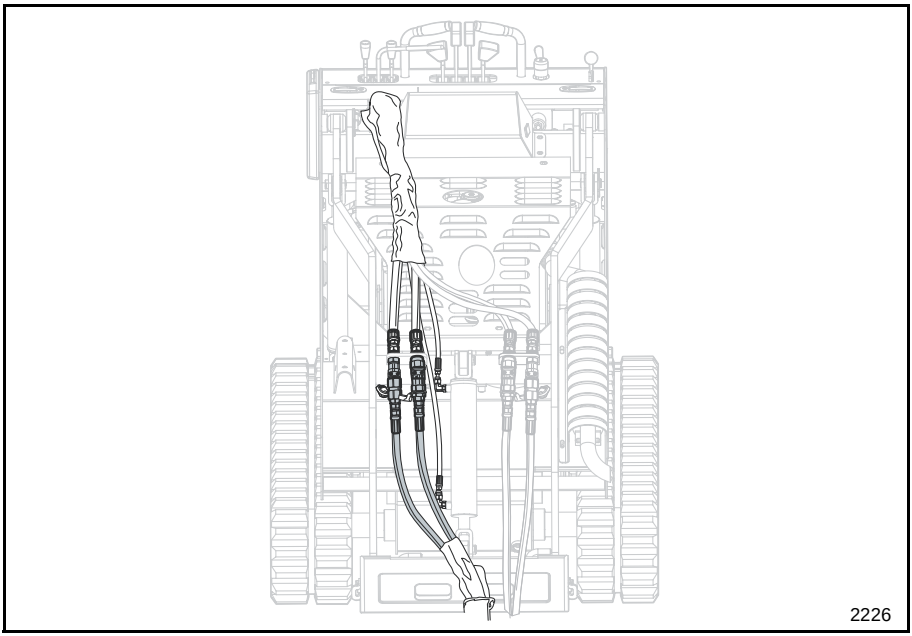

Figure 7 Attachment Hydraulic Hose Routing

Operating Instructions for the Chain Trencher Hydraulic Attachment

⚠ WARNING

BEFORE BEGINNING ANY TRENCHING, MAKE SURE THAT THE WORK AREA HAS BEEN INSPECTED AND MARKED FOR UNDERGROUND UTILITIES OR POTENTIAL OBSTRUCTIONS. ANY CONTACT WITH UNDERGROUND UTILITIES CAN POTENTIALLY CAUSE INJURY OR DEATH. CONTACT DIGGERS HOTLINE (1-800-242-8511) TO HAVE THE WORK AREA INSPECTED AND MARKED.

⚠ CAUTION

- **Before starting the engine, make sure that the Auxiliary Hydraulic control lever is in the NEUTRAL position. If this control is left in either the forward or reverse position and the engine is started, the attachment will begin to function.**
- **The instructions in this manual refer to a power unit that has an operator presence control that when released, automatically shuts off the attachment, but allows the engine to continue to operate. Other operator presence systems may have an electrical interface designed into the operator's platform. This type of system will shut off the engine if the operator leaves the control position. Make sure that you know which system is installed on the power unit to which the accessory will be attached.**

NOTICE: Since Mertz Manufacturing LLC has no direct control over machine application or operation, following the proper safety practices is the responsibility of the owner and/or operator of the machine. The operating instructions shown in this section are based on the use of a Mertz Manufacturing LLC designed and manufactured power unit.

1. Move the engine throttle to the full speed setting.
2. Raise the attachment off the ground and position it for use.

⚠ CAUTION

- **Make sure that you are standing on the operator's platform.**
- **DO NOT step off of the platform when the auxiliary attachment's power is engaged.**
- **If you release the AUXILIARY hand control/operator presence control, the attachment will automatically stop all motion but the engine will continue to run.**

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3. With your right hand, squeeze the AUXILIARY/OPERATOR PRESENCE control lever (Item 1, Figure 8) towards the hand hold to activate the attachment in the FORWARD motion.

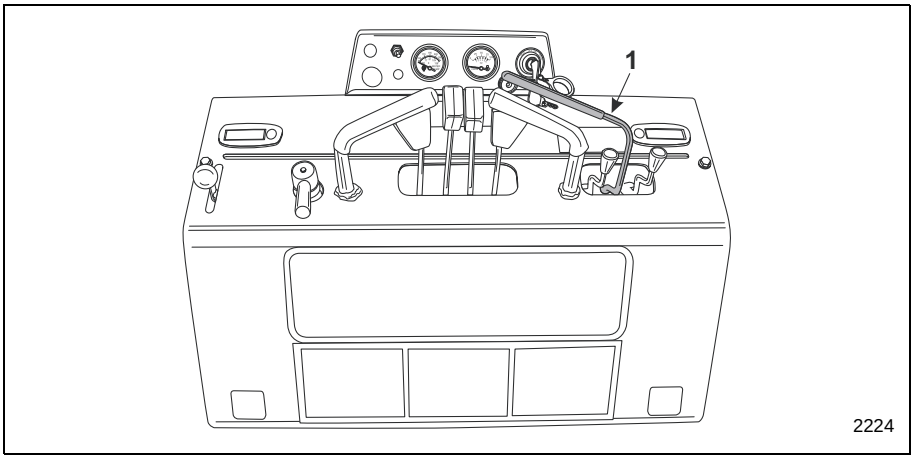


Figure 8 Auxiliary Attachment Controls

4. Using the tilt control lever, rotate the trencher upwards so that the front tip (Item 2, Figure 9) is slightly elevated and not contacting the ground.

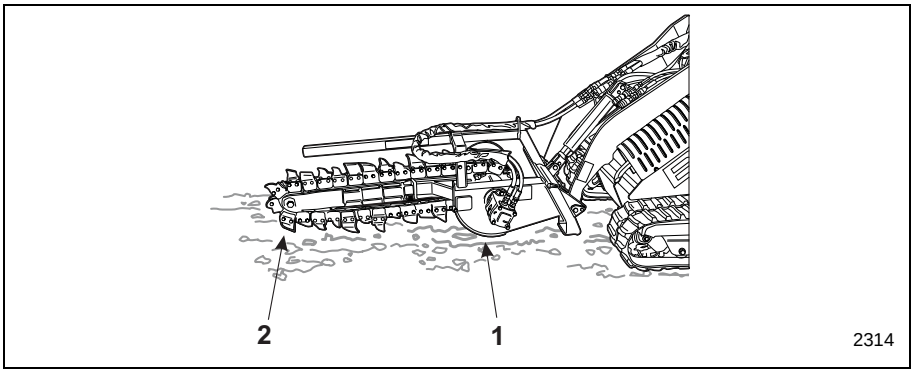


Figure 9 Initial Trencher Work Position

5. Lower the attachment to the ground, making sure that the skid shoe (Item 1, Figure 9) is in contact with the ground and the chain is still elevated.
6. Using the tilt control, slowly rotate the trencher downwards into the ground to the desired digging depth. Make sure that the skid shoe (Item 1, Figure 10) remains in contact with the ground.

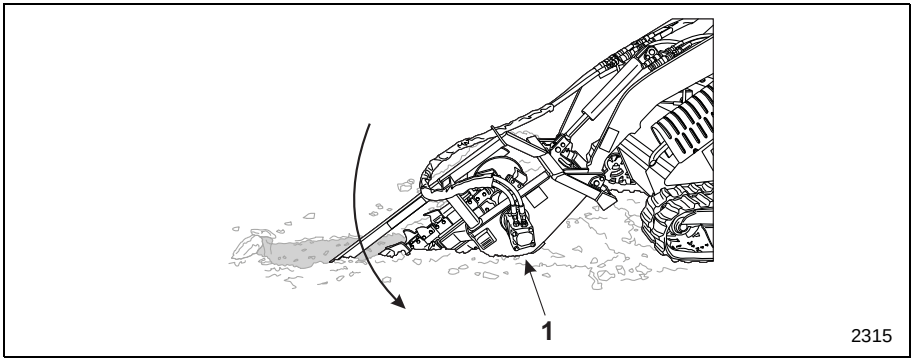


Figure 10 Chain in Work Position

7. If you want to reverse the operation of the attachment, move the auxiliary control lever (Item 1, Figure 8) to the REVERSE position. The control lever will remain in the REVERSE position detent until it is moved to the NEUTRAL position.

Section 2 – Travel Crawl Control

⚠ CAUTION

The instructions in this manual refer to a power unit that has a Travel Creep control that allows the operator to adjust the travel speed when the attachment is engaged, and a High/Low control switch. If the power unit is not equipped with either of these controls, refer to the machines Operator's Manual for specific user instructions.

The travel system on the machine can be adjusted to make the attachment more effective in tough digging situations. The travel "crawl" control allows the travel speed to be adjusted from full speed forward or reverse to no movement at all. To adjust the travel speed using the crawl control, set the High/Low travel speed switch is in the HIGH position, move the engine throttle lever to the maximum engine speed and:

1. With the attachment raised off the ground, move the AUXILIARY/OPERATOR PRESENCE control lever (Items 1, Figure 11) to either the FORWARD or REVERSE position to activate the trencher.

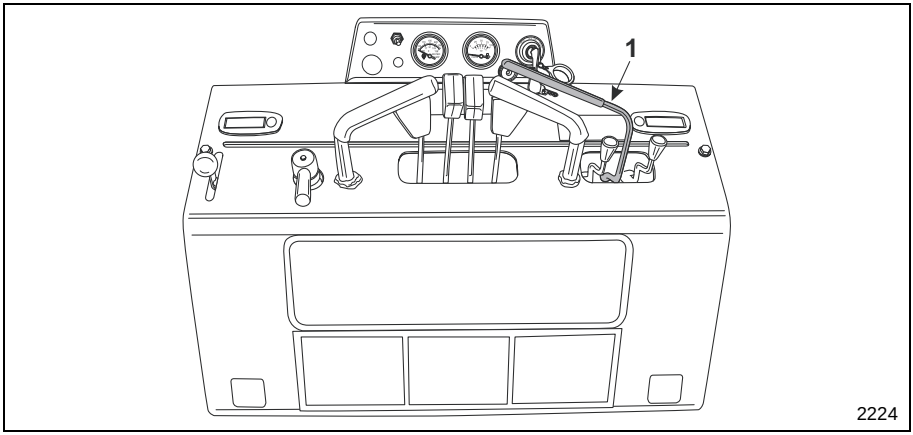


Figure 11 Auxiliary Control

2. Lower and position the trencher to the work position as stated in the Operating Instructions above.

3. Rotate the CRAWL control lever (Item 1, Figure 12) to adjust the travel speed as needed.

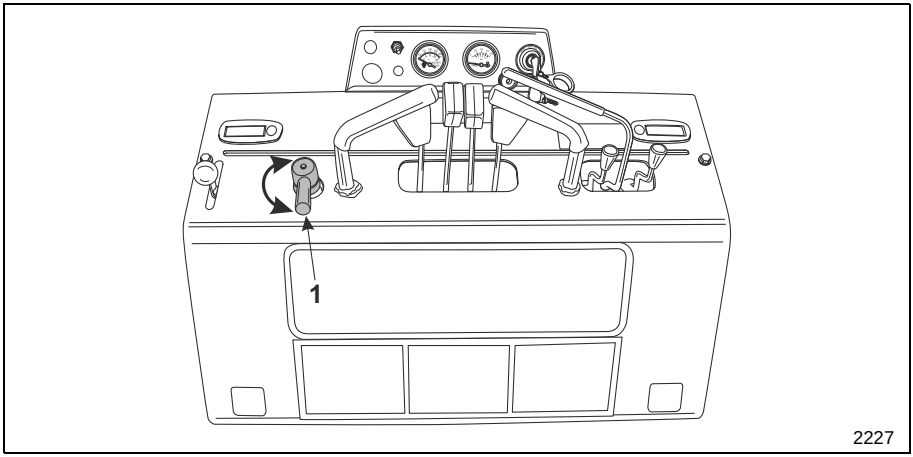


Figure 12 Crawl Speed Adjust Control

4. Rotate the CRAWL control lever fully clockwise to the turtle, or NO TRAVEL position.
5. Full hydraulic power will be directed to the trencher and the machine will not move.
6. Move both travel control levers to the full reverse travel position.
7. While holding both of the control levers in the reverse position and with the trencher operating, rotate the CRAWL control lever counter-clockwise until you set the proper travel speed for the attachment being used.

   NOTICE: Rotating the crawl control lever counter-clockwise increases the travel speed from very slow to full operating speed. The faster the machine travels, the less hydraulic power will be directed to the attachment. The slower the machine travels, more hydraulic power will be directed to the hydraulic attachment.
8. When the crawl travel speed has been set properly, steering and direction control can be adjusted by using either or both of the travel control levers.

⚠ CAUTION

When using CREEP VALVE control and the travel controls together with an attachment activated, DO NOT release the AUXILIARY/OPERATOR PRESENCE control until the travel controls are in the NEUTRAL position.

9. To return to full operating speed, release both travel control levers and rotate the CRAWL control lever counter-clockwise past the highest speed setting into the “detent” OFF position.
10. Full speed range will be returned to the main travel control levers.

Removal of Hydraulically Powered Attachments

After use, the quick couples and hydraulic fluid will be very hot. Wear gloves when disconnecting the auxiliary hydraulic lines.

1. Lower the attachment to the ground and shut off the engine.
2. Move the hydraulic control levers forward or backward to release any stored hydraulic pressure.
3. Some of the female couplings will have a lock button preventing accidental disconnection. To release this type of quick connect, rotate the collar on the female quick connect (Item 1, Figure 13) to align the notch on the collar with the lock button (Item 2, Figure 13).
4. Slide the collar backwards on the female quick connect (Item 4, Figure 13) until it stops against the lock button. The male connector will be released.
5. Move the attachment hose away from the bulkhead fitting.
6. If the female connector does not have the lock pin type collar, just slide the collar backwards until the male connector is released.

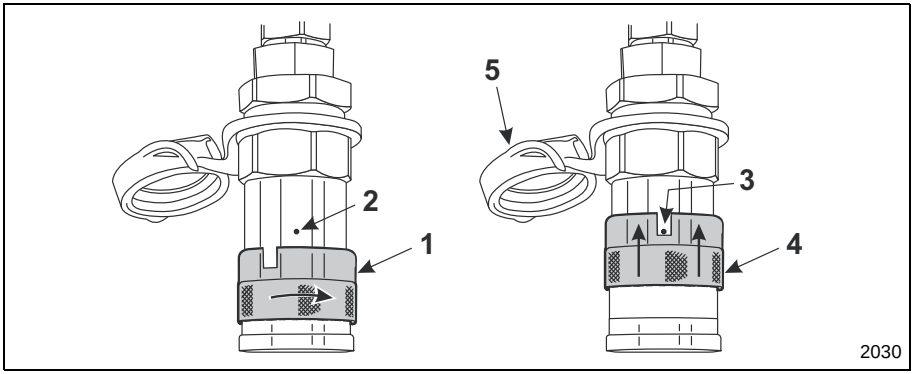


Figure 13 Quick Connect Locking Collar

7. Repeat this procedure on the other hydraulic line.
8. Cover the hose connections with the dust caps (Item 5, Figure 13) and store the hydraulic hoses to prevent damage.

9. Rotate the attachment lock pins to the UNLOCKED position (Item 1, Figure 14).

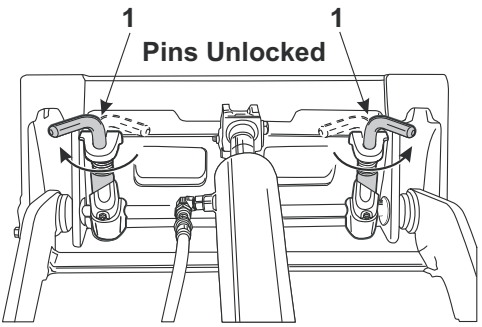


Figure 14 Attachment Locks in Unlocked Position

10. Start the engine and rotate the mounting plate downwards.
11. Back away from the attachment.

    NOTICE: It may be necessary to lower the loader arm assembly slightly to fully disengage from the attachment.

Section 3 – Troubleshooting

⚠ WARNING

HYDRAULIC OIL UNDER PRESSURE CAN PENETRATE BODY TISSUE CAUSING SERIOUS INJURY AND POSSIBLE DEATH. WHEN TROUBLESHOOTING A HYDRAULIC SYSTEM FOR LEAKS, ALWAYS USE CARDBOARD OR WOOD AS A DETECTOR. DO NOT USE YOUR BARE HANDS. IF YOU ARE INJECTED WITH HYDRAULIC OIL OR ANY OTHER FLUIDS, IMMEDIATELY SEEK TREATMENT BY A DOCTOR TRAINED IN THE TREATMENT OF PENETRATING FLUID INJURIES.

Problem	Cause	Remedy
Trencher chain does not turn	a. Auxiliary hydraulic lines not connected. b. Power unit has more that one set of auxiliary hydraulic lines. c. High/Low switch not in proper setting. d. Engine not at rated speed. e. Auxiliary control lever not in the proper position. f. Nose drive sprocket failure g. Power unit is low on hydraulic fluid. h. Trencher Chain drive motor is leaking hydraulic fluid.	a. Connect auxiliary hydraulic lines. b. Connect trencher hydraulic lines to the correct auxiliary hydraulic lines. c. Set High/Low switch to the High position. d. Move throttle to maximum RPM setting. e. Hold Auxiliary control lever in the activation position. f. Replace nmose drive sprocket g. Refer to power units Operator's Manual h. Replace hydraulic auger drive motor.
Engine does not start with trencher attached	a. Auxiliary control lever in activation position.	a. Move control lever to Neutral position.
Trencher Chain rotates, but not smoothly or stops and starts.	a. Soil may contain rocks or other items that are preventing smooth operation. b. Power unit is low on hydraulic fluid. c. Trencher hydraulic drive motor is failing.	a. Raise trencher chain from the trench to clear contact with the obstruction. b. Refer to power units Operator's Manual. c. Replace hydraulic drive motor.
Trencher chain rotates in reverse direction when auxiliary control is activated.	a. Auxiliary hydraulic lines are reversed.	a. Reverse hydraulic lines. **CAUTION** - make sure to shut off the engine and release pressure in the hydraulic lines before removing the hydraulic lines from the quick connects.
Hydraulic drive motor is turning but the spoils auger does not move	a. Spoils auger connection bolt not installed. b. Spoils auger connection bolt has sheared off.	a. Install and secure connection bolt. b. Install and secure connection bolt.
Hydraulic fluid is leaking from trencher drive motor.	a. Hydraulic fitting loose. b. Internal hydraulic motor seals leaking.	a. Tighten hydraulic fittings. b. Replace hydraulic drive motor.
Engine starts but does not continue to run when using auxiliary attachment.	a. Too much downward force is being applied to attachment, stalling engine. b. Power unit low on fuel.	a. Raise attachment slightly. b. Refuel power unit.
Poor trencher performance, does not penetrate soil easily.	a. Worn trencher chain teeth. b. Not enough down pressure on trencher.	a. Replace worn trencher teeth b. Increase downward pressure on the trencher.

Section 4 – Maintenance

Recommended Maintenance Schedule

Maintenance Service Interval	Maintenance Procedure
8 hours	• Grease bearing housing fitting.
	• Check the teeth and replace any that are worn or damaged.
	• Check and replace any damaged or missing safety and operating decals.
	• Check the bolt and nut securing the spoils auger. Tighten or replace as needed.
	• Adjust digging chain tension, as required by digging conditions.
25 hours	• Adjust the digging chain tension.
	• Check the condition of the bearing case lube.
200 hours	• Change the bearing case lube.
Long Term Storage Service	• Grease bearing housing fitting.
	• Adjust the digging chain tension.
	• Paint chipped surfaces

⚠ CAUTION

If you leave the key in the ignition switch, someone could accidentally start the engine and seriously injure you or other technician. Remove the key from the ignition and disconnect the wire from the spark plug before you do any maintenance. Set the wire aside so that it does not accidentally contact the spark plug.

Greasing the Trencher

Grease the bearing housing fitting every 8 operating hours and immediately after every washing.

NOTICE: The nose roller has a permanently lubricated bearing and does not require any lubrication

1. Make sure to clean out the protective cup around the grease zerk and the grease zerk (Item 1, Figure 15) before lubricating.
2. Using a grease gun and general purpose grease, pump grease into the fittings until grease begins to ooze out of the bearings.
3. Wipe up any excess grease.

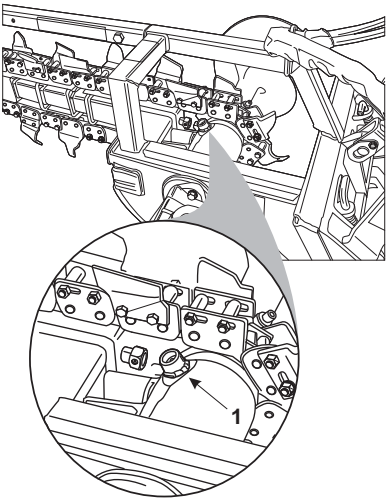


Figure 15 Trencher Grease Zerk

NOTICE: If any leaking fluid is noted at the bearing housing, the seal in the hydraulic motor is leaking and the motor requires replacement. See Remove and Replace Hydraulic Drive Motor later in this manual.

Adjusting Digging Chain Tension

Adjust the digging chain tension every 25 operating hours. With the trencher parallel to the ground, make that there is 1-1/2 to 2-1/2 inches of chain sag between the bottom of the boom and the top of the bottom chain span. See Figure 16.

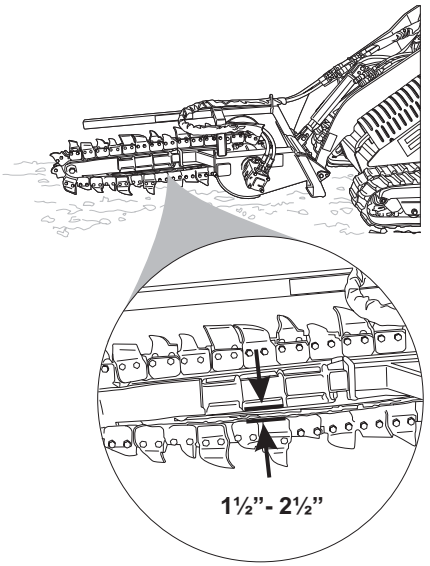


Figure 16 Chain Sag

NOTICE:

- For a new chain, check the chain sag after the first hour of operation.
- Depending on working conditions, chain sag adjustments may need to be done more frequently.

If a chain sag adjustment is needed, adjust the chain using the following procedure:

NOTICE: Do not over tighten the chain. Excess chain tension may damage drive components.

The trencher boom assembly has a spring tension system built in to provide the proper tension to the chain and to limit damage to the trencher by absorbing sudden impact to the trencher. If the chain tension needs to be adjusted:

1. Rotate the chain adjustment bolt (Item 1, Figure 17) to increase or decrease pressure on the boom tension spring until the proper chain sag is measured.

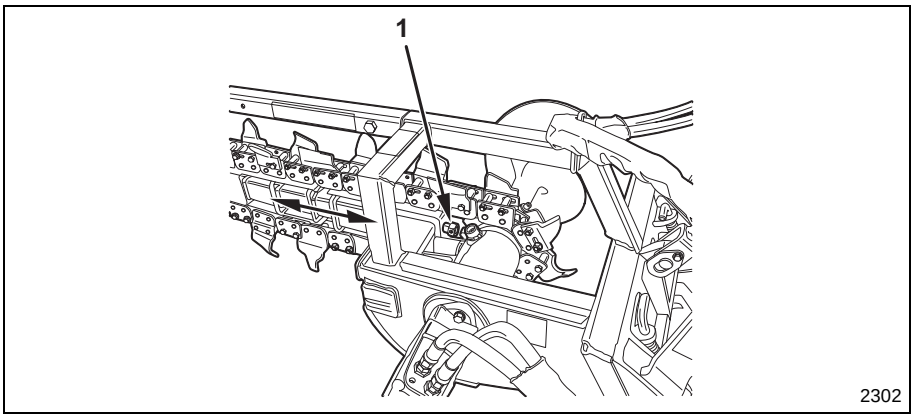


Figure 17 Chain Tension Adjustment

Trencher Boom Replacement

NOTICE: For this procedure, mount the trencher onto a machine, but do not connect the hydraulics. Raise the trencher off the ground a short distance to make working on it easier.

⚠ CAUTION

Make sure to shut off the machines engine and remove the key from the ignition.

1. Inspect the bottom of the boom for wear, if it is worn, complete the following:
2. Loosen the Chain Tension Adjustment Bolt (Item 2, Figure 18) to fully release the spring pressure.
3. Remove the chain from the boom tip sprocket.
4. Slide the boom assembly (Item 4, Figure 18) forward.

   NOTICE: The boom adjustment bolt (Item 2, Figure 18) and tension spring (Item 3, Figure 18) are located inside the boom assembly. Make sure not to damage these when removing the boom assembly.
5. Flip the boom assembly over so the bottom becomes the top. If the boom assembly has already been flipped, replace it with a certified Mertz replacement part.
6. Slide the boom assembly over the tension spring and adjustment bolt and into the main trencher frame.
7. Reinstall the chain onto the trencher nose roller.
8. Adjust the chain tension following the “Adjust the Digging Chain Tension” instruction listed earlier in this manual.

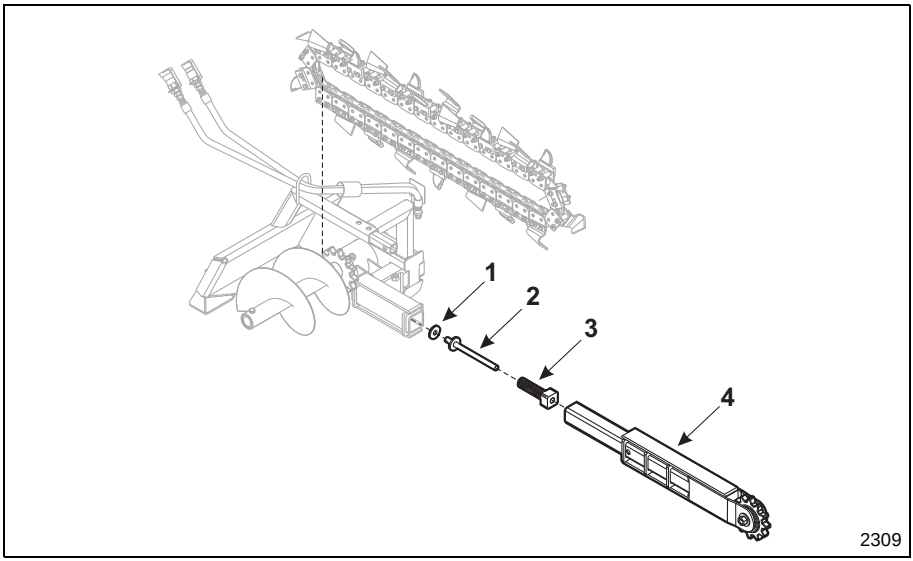


Figure 18 Trencher Boom

Replacing the Digging Teeth

Due to the high amount of wear placed on the digging teeth, you will need to replace them periodically. To replace a single tooth (Items 3 and 5, Figure 19), remove the bolts and nuts (Item 1 and 2, Figure 19) securing the tooth to remove it, and then install a new tooth in the same position.

NOTICE: The spacer tubes (Item 4, Figure 19) will fall free. Make sure to reinstall these when the new tooth is installed.

Torque the bolts securing the teeth to 27 to33 ft.-lb.

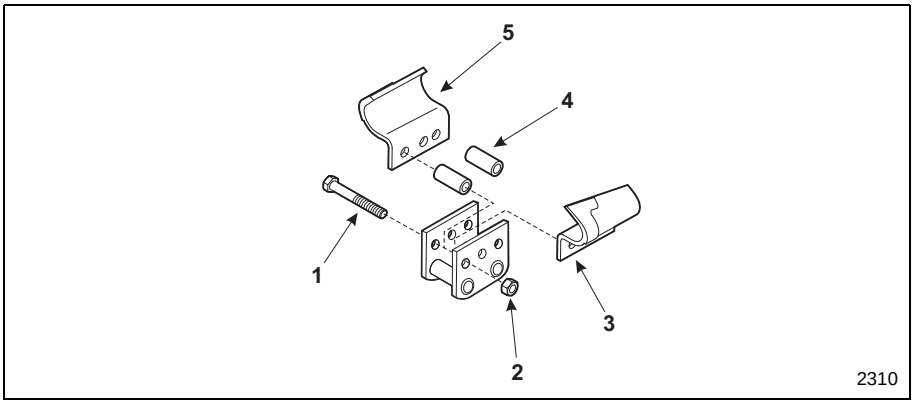


Figure 19 Tooth Replacement

Replacing the Drive Sprocket

Overtime, the drive sprocket will wear, especially when used in sandy or clay soils. When this happens, the digging chain will begin to slip. If the chain slips, replace the drive sprocket, as follows:

1. Raise the trencher a few inches above the ground.
2. Stop the engine and remove the key.
3. Remove the spoils auger (Item 4, Figure 20).
4. Loosen the chain tensioning bolt or break the chain at the master link to remove the chain from the boom.
5. Remove the chain from the drive sprocket (Item 2, Figure 20).
6. Remove and discard the old drive sprocket, making sure to keep the drive key (Item 3, Figure 20).
7. Clean the sprocket mounting surface on the trencher.
8. Slide the new sprocket onto the drive shaft, align the key ways and insert the key locking the sprocket to the shaft.
9. Loop the chain over the auger drive shaft and onto the drive sprocket, making sure that the teeth point forward on the upper span.
10. Install the spoils auger and secure it using the nut (Item 6, Figure 20) and bolt (Item 5, Figure 20) removed earlier.
11. Set the upper span of the chain into place on the trencher boom, and then wrap the chain around the roller at the end of the boom.
12. Tighten the chain tension adjustment bolt until the proper chain tension is set according to the Adjusting Digging Chain Tension instructions shown earlier in this manual.

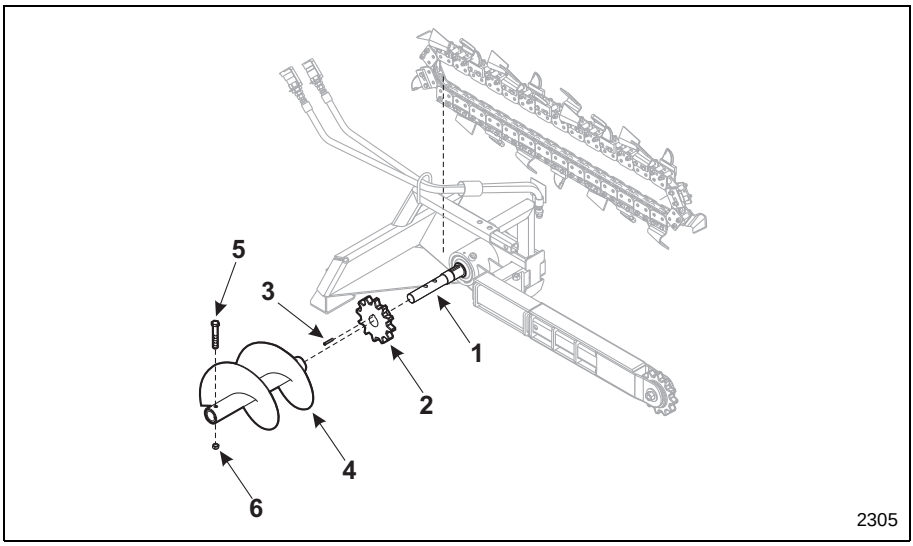


Figure 20 Remove Spoils Auger

Replace Nose Drive Sprocket

NOTICE: For this procedure, mount the trencher onto a machine, but do not connect the hydraulics. Raise the trencher off the ground a short distance to make working on it easier.

⚠ CAUTION

Make sure to shut off the machines engine and remove the key from the ignition.

Overtime, the nose drive sprocket will wear, especially when used in sandy or clay soils. When this happens, the digging chain will begin to slow down or stop. If the nose drive sprocket has failed, replace it as follows:

1. Raise the trencher a few inches above the ground.
2. Stop the engine and remove the key.
3. Remove the chain from the boom by breaking the chain at the Master Link and remove the chain from the boom.
4. Remove the nut (Item 4, Figure 21) and washer (Item 3, Figure 21) that secures the nose drive sprocket bolt (Item 1, Figure 21) to the boom (Item 5, Figure 21).
5. While holding the nose drive sprocket (Item 2, Figure 21), remove the bolt.
6. The nose drive sprocket will fall free.

   NOTICE: Inspect the upper and lower wear surfaces of the boom assembly for signs of excessive wear. See Trencher Boom Replacement earlier in this manual.
7. Install new nose drive sprocket and secure with bolt, washer and nut.
8. Reinstall and tension trencher chain.

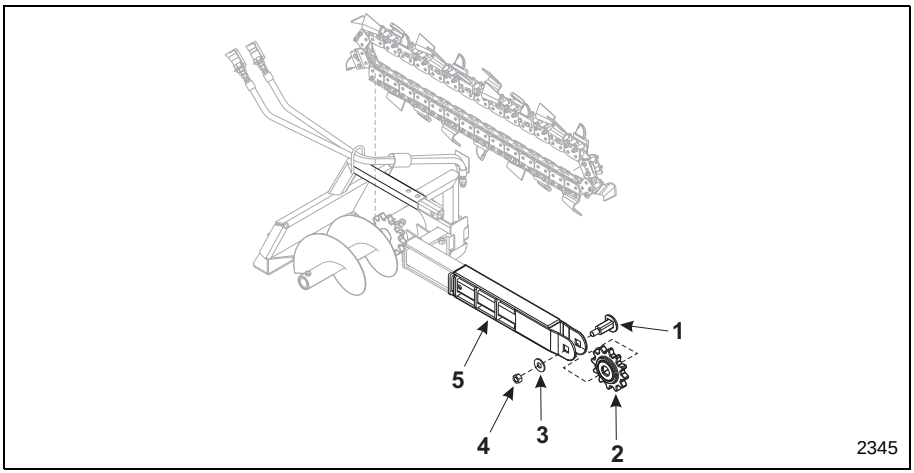


Figure 21 Nose Drive Sprocket Replacement

Chain Master Link

If the trencher chain needs to be removed from the trencher, it can be broken at the Master Link.

⚠ CAUTION

When the Master Link is removed, the chain could fall off the trencher frame. Keep your hands and feet from underneath the chain to prevent injury.

To separate the Master Link:

1. Inspect the chain and locate the master link (Item 1, Figure 22), which will have a removable pivot pin and cotter pin instead of two bolts.
2. Support the trencher chain from underneath the trencher frame.
3. Remove the cotter pin (Item 2, Figure 22) from the pivot pin (Item 3, Figure 22) and then remove the pivot pin.
4. Remove the spacer tube (Item 4, Figure 22) from the chain links (Item 5, Figure 22).
5. Using an appropriate lifting device, remove the trencher chain from the trencher frame.
6. Replace the trencher chain and reassemble the master link by reversing Steps 1-5.

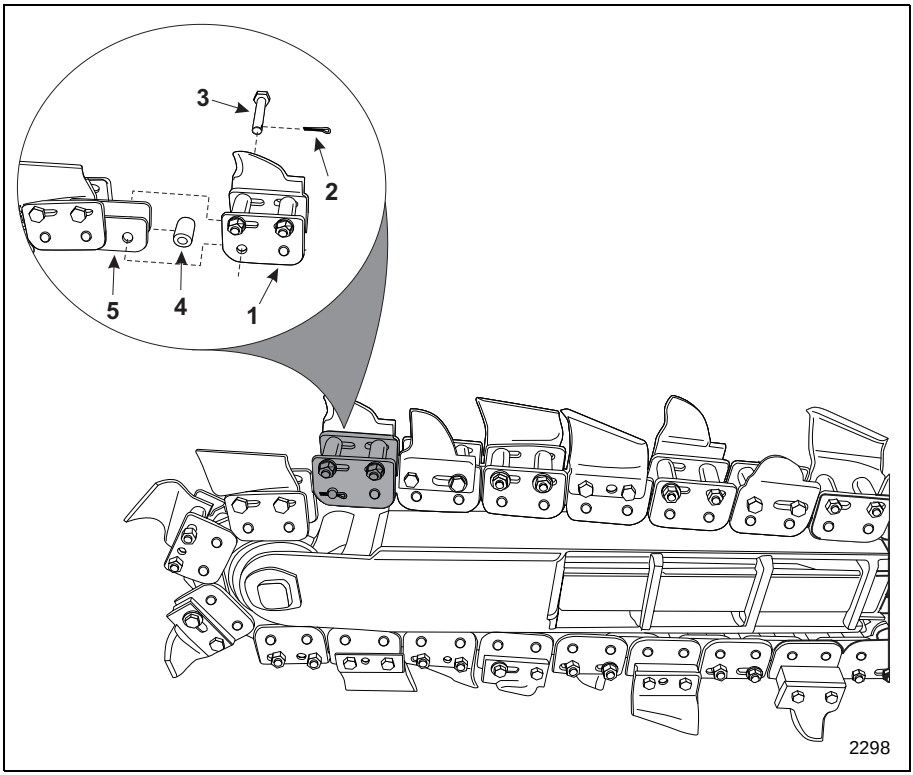


Figure 22 Auger Drive Shaft

Chain Configuration

You can set up the chain in different configurations, depending on the width of the trench desired and the soil conditions at the work site. Depending on the size of boom you purchased, you will either have a chain with:

- 24 links (24 inch [60.9 cm] boom)
- 32 links (36 inch [91.4 cm] boom)

Each link can have digging teeth fastened to it and are referred to as a station. At any station, the teeth can be fastened in various configurations with spacers and tubes to vary the width of cut. The station configurations are placed along the chain in an order that maximizes digging efficiency.

There are two types of teeth, cupped and triangular rock teeth. Cupped teeth are designed to cut through and remove soil. Triangular rock teeth cut rock and other hard ground. The teeth are cupped or angled differently depending on which side of the chain they are intended to be fastened (i.e., either left or right). The teeth are fastened to the chain links using bolts, nuts, tubes, and spacers of varying sizes. Figure 23 illustrates the various components of several tooth configurations.

The table on the following page lists some of the chain configurations, detailing which tooth configuration should be installed at each station around the chain for each chain configuration.

NOTICE:

- Each table lists the configurations for 32 positions. If you are changing the configuration of a 24 link chain, ignore the positions 25 through 32 in the tables.
- Make sure to orient the tooth in the proper direction. Figure 23 shows the rear of the tooth. If the tooth is installed backwards, the trencher chain will not work properly.

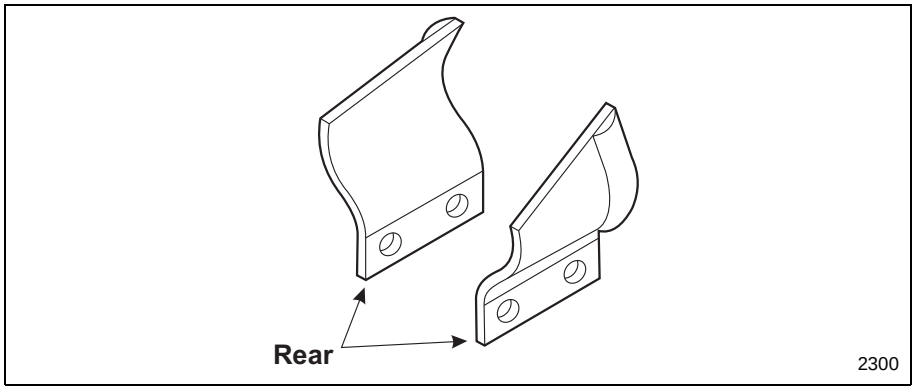


Figure 23 Tooth Direction

Configuring the Chain

To configure the chain, complete the following procedures:

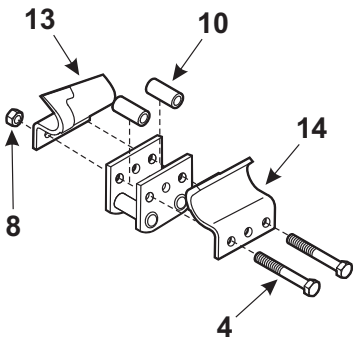
Select the chain configuration you want to install from the chain configuration illustrations (Configurations A - E, Figure 24) and obtain all necessary parts.

1. Lower the loader arms, stop the engine, and remove the key.
2. Remove the unneeded teeth and other hardware from the links on the top span of the chain.

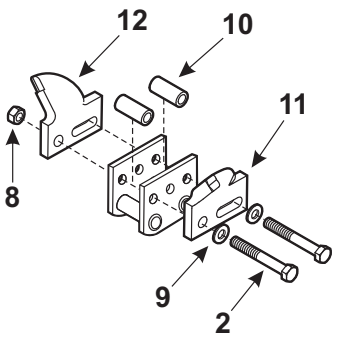
   NOTICE: NOTICE: When removing teeth, keep the components of each tooth set together so you can assemble them later.
3. Install each tooth set across the top span from front to back, in the order listed in the appropriate chain configuration table.

   NOTICE: NOTICE: Install the tooth configuration illustrated for station 1 first, followed by the tooth configuration for station 2, and so on.
4. Torque the bolts to 27 to 33 ft.-lb.
5. When all positions are installed on the top span, start the engine, raise the trencher slightly off the ground using the loader arms, and slowly run the chain forward to expose a new section of chain.
6. Stop the engine and remove the key.
7. Repeat steps 3 through 7 until all chain positions have been changed.

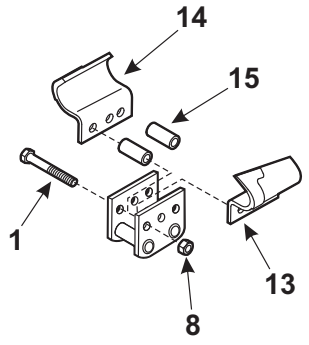
Section 5 – Parts List



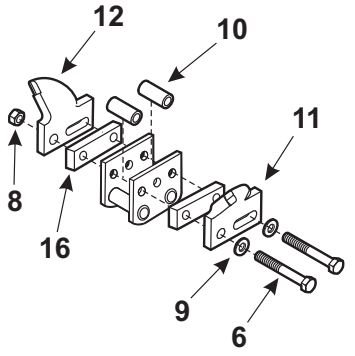
Configuration A



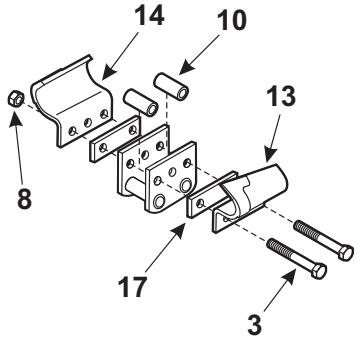
Configuration D



Configuration B



Configuration E

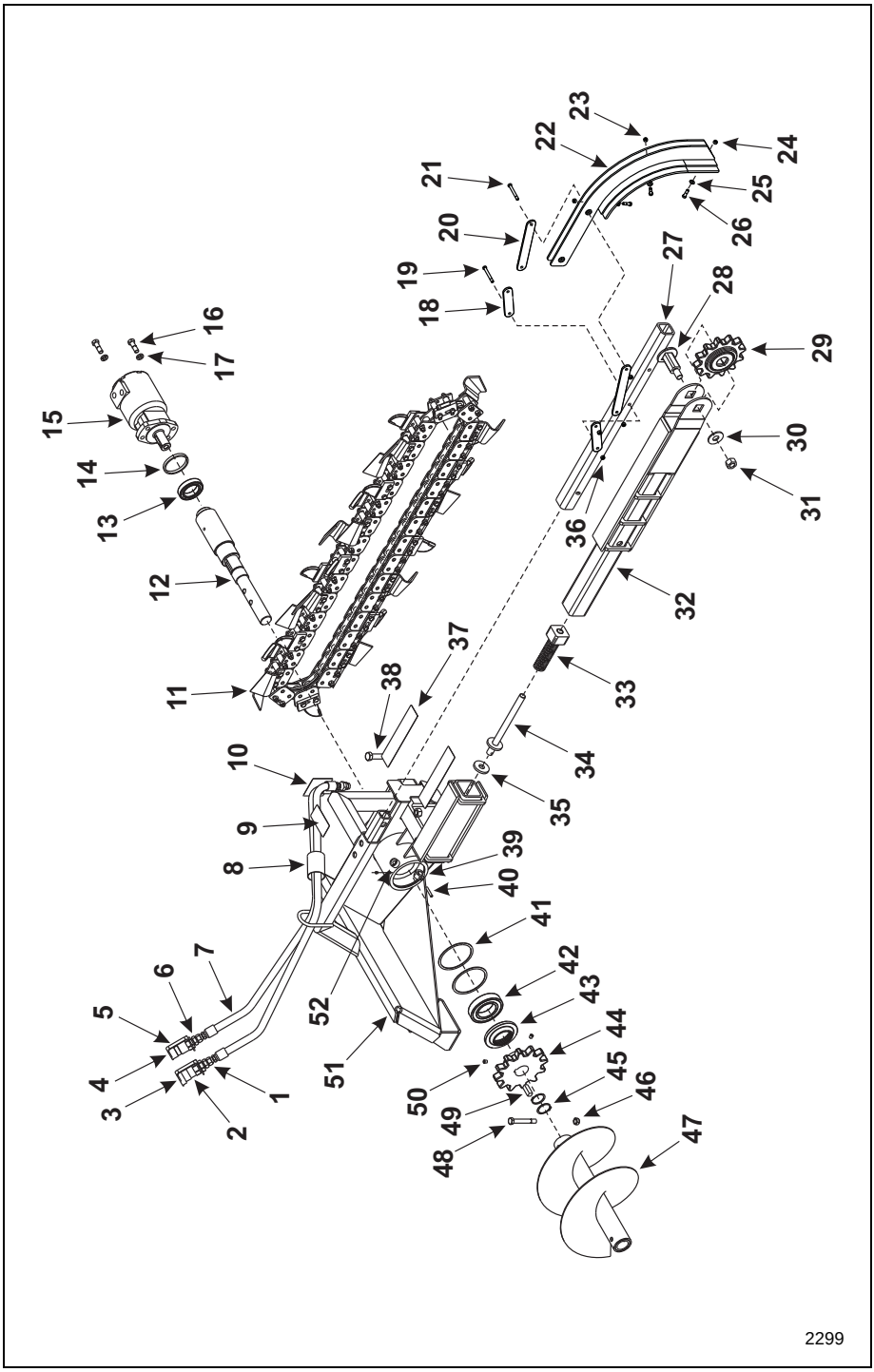


Configuration C

Figure 24 Chain Configuration and Parts List

2303-2

Trencher Chain Parts List			
Item No	Description	Quantity	Part No.
1	BOLT, 3/8"-24 X 2 1/4	12	38242148
2	BOLT, 3/8"-24 X 2 3/4	24	38242348
3	BOLT, 3/8"-24 X 3	8	382438
4	BOLT, 3/8"-24 X 2 1/2	12	38242128
6	BOLT, 3/8"-24 X 3 3/4	8	38243348
8	LOCK NUT	64	3824
9	FLAT WASHER	16	382S
10	SPACER TUBE, 1 3/8	52	B135320
11	LEFT TERMINATOR TOOTH	8	T165404L
12	RIGHT TERMINATOR TOOTH	8	T165404R
13	LEFT CUP TOOTH	8	6655760
14	RIGHT CUP TOOTH	8	6655759
15	SPACER TUBE, 1 1/4	12	6576368
16	FLAT SPACER	4	BL1654-6
17	FLAT SPACER	4	BL1654-5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Trencher Chain Assembly Parts List			
Item No	Description	Quantity	Part No.
1	FITTING	4	2290143
2	FEMALE QUICK CONNECT	1	2416626
3	DUST COVER	1	2410353
4	DUST COVER	1	2410354
5	MALE QUICK CONNECT	1	2416627
6	FITTING	1	2416627
7	HOSE ASSEMBLY	2	3500132-075.92
8	SLEEVE	1	2414914-060.00
9	"CALL BEFORE YOUR DIG" WARNING DECAL	1	2400442
10	HIG PRESSURE FLUID WARNING DECAL	1	2702402
11	CHAIN ASSEMBLY	1	
12	DRIVE SHAFT	1	802122
13	BEARING	1	2413212
14	MOTOR SPACER TUBE	1	802128
15	HYDRAULIC DRIVE MOTOR	1	2391358
16	BOLT	2	1913337C
17	LOCK WASHER	2	2303415
18	REAR CRUMMER PIVOT PLATE	2	802224
19	BOLT	2	1913403C
20	FRONT CRUMMER PIVOT PLATE	2	802226
21	BOLT	2	1913403C
22	TRENCHER CRUMMER ASSEMBLY	1	802220
23	NUT	3	70.32012
24	NUT	4	70.32012
25	FLAT WASHER	3	2303144
26	BOLT	4	1913403C
27	SUPPORT TUBE	1	802232
28	NOSE SPROCKET PIN	1	802202
29	NOSE DRIVE SPROCKET	1	2417903
30	FLAT WASHER	1	2303149
31	NYLOCK NUT	1	2294406
32	BOOM ASSEMBLY, 36	1	802191
33	TRENCHER TENSIONING SPRING	1	2417906.COMP
34	ADJUSTMENT ARM	1	802125
35	POLY WASHER	1	802181
36	NUT	4	70.32012
37	STAND CLEAR DECAL	1	2400441
38	BOLT	1	11913407F
39	NUT	1	802127
40	ROLL PIN	1	2297655
41	INTERNAL SNAP RING	2	2401878
42	BEARING	1	2413213
43	SEAL	1	802124
44	REAR DRIVE SPROCKET	1	2417907
45	EXTERNAL SNAP RING	2	2401880
46	NYLOCK NUT	1	1470110
47	DISCHARGE AUGER	1	802115
48	BOLT	1	1913452C
49	KEY	1	2805-30
50	SET SCREW	2	1912057C
51	TRENCHER BODY	1	802158
52	GREASE ZERK	1	2651851

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